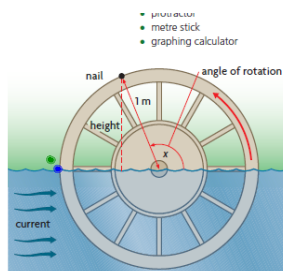


The Sine Function 6.3 and 6.4 p. 335-339 & p. 344-348

INVESTIGATE the Math

Steve uses a generator powered by a water wheel to produce his own electricity.

- Half the water wheel is below the surface of the river.
 - The wheel has a radius of 1 m.
 - The wheel has a nail on its circumference.
- As the current flows, the wheel rotates in a counterclockwise direction to power the generator. The height of the nail, relative to the water level, as the wheel rotates is graphed in terms of the angle of rotation, x .



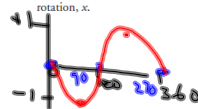
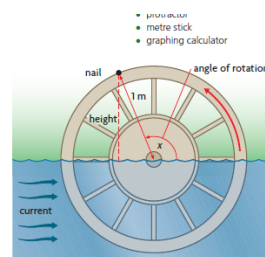
Maximum -
Minimum -
Eqn of Axis of Symmetry -
Period -
Amplitude -

Nov 16-7:42 AM

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Maximum -
Minimum -
Eqn of Axis of Symmetry -
Period -
Amplitude -

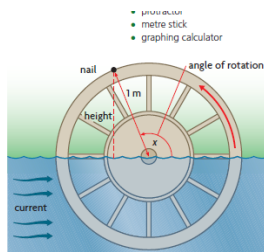
1 m
 -1 m
 $y = 0$
 360°
 1 m

Nov 16-7:42 AM

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Maximum -
Minimum -
Eqn of Axis of Symmetry -
Period -
Amplitude -

1 m
 -1 m
 $y = 0$
 360°
 1 m

Nov 16-7:42 AM

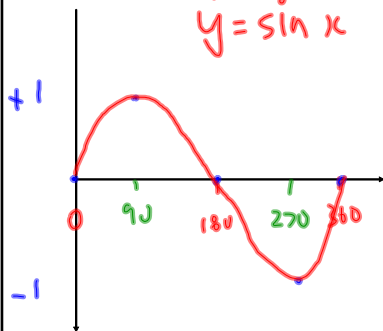
Key Points of Sine Function

- $y = \sin x$
- $(0, 0)$ - eqn of the axis of symmetry
 - $(90, 1)$ - maximum
 - $(180, 0)$ - eqn of the axis
 - $(270, -1)$ - minimum
 - $(360, 0)$ - eqn of the axis

Apr 27-10:11 AM

$$f(x) = \sin x$$

$$y = \sin x$$

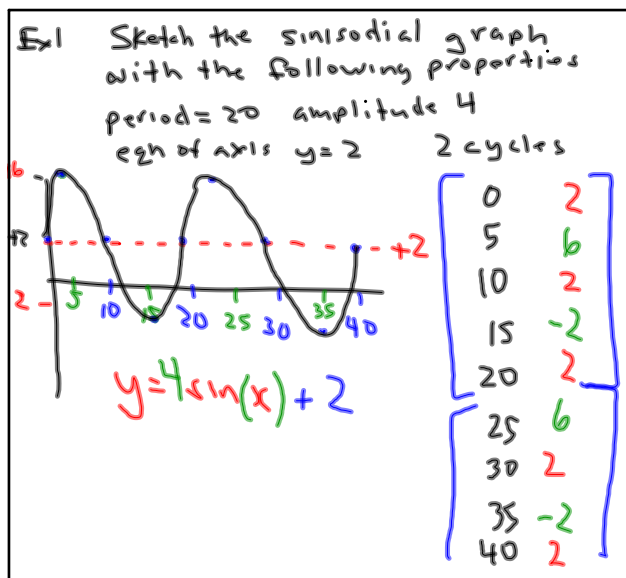


Nov 17-11:04 AM

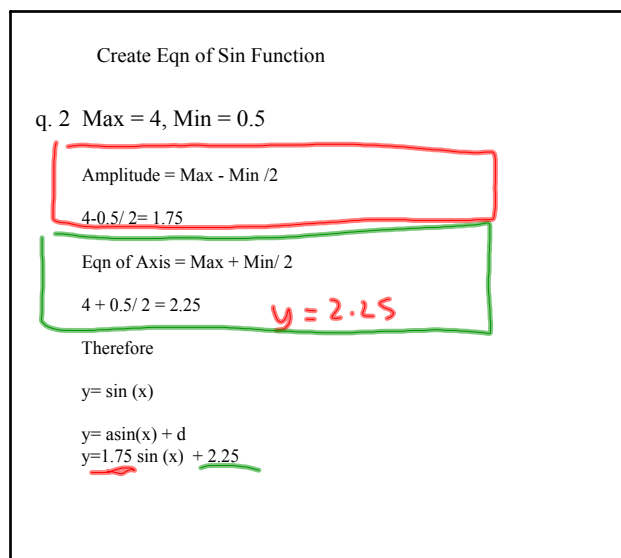
Ex1 Sketch the sinusoidal graph with the following properties
period = 20 s amplitude 4
eqn of axis $y = 2$ 2 cycles

Maximum - $(2+4)$ 6 m
Minimum - $(2-4)$ -2
Eqn of Axis of Symmetry - 2 m
Period - 20 s
Amplitude - 4

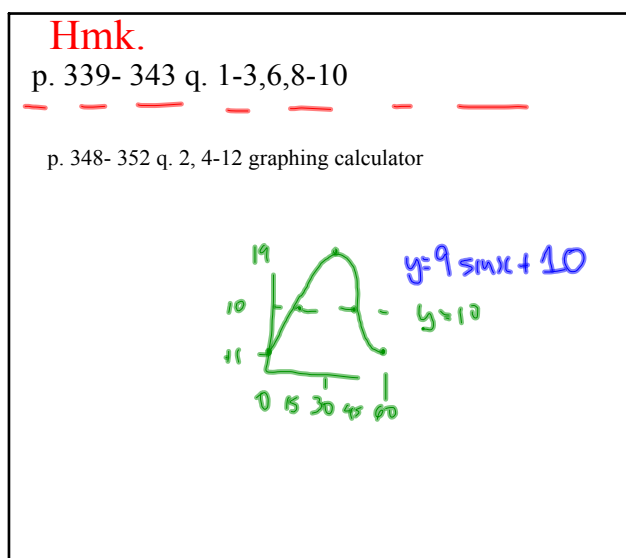
Nov 16-7:47 AM



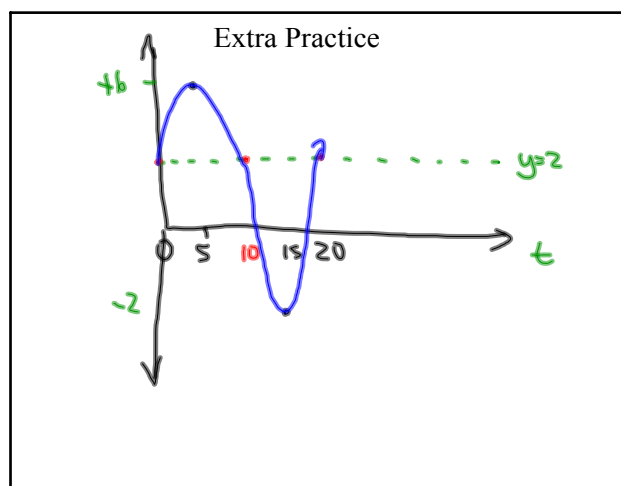
Apr 27-10:40 AM



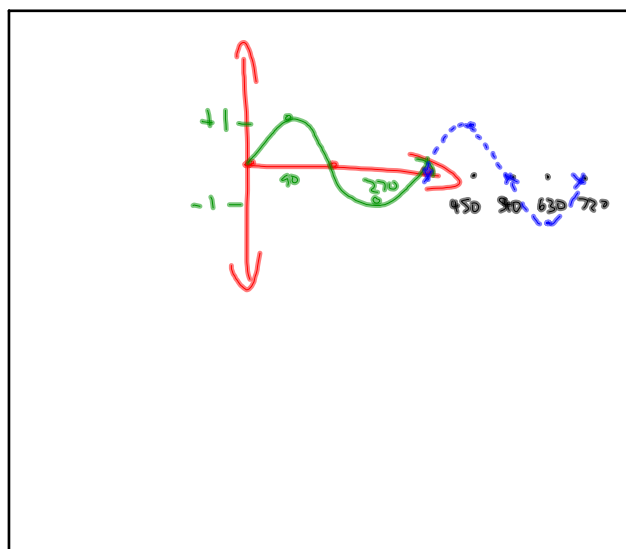
Nov 23-10:01 AM



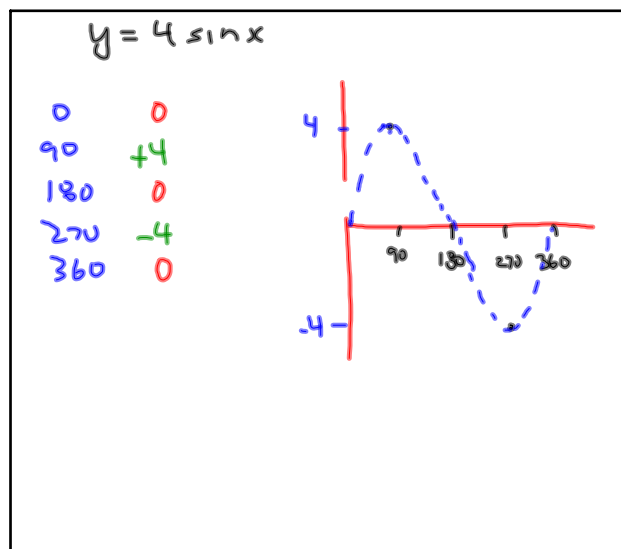
Apr 27-10:52 AM



Apr 19-8:41 AM



Apr 21-10:32 AM



Nov 18-2:50 PM